

pub BDI

- 5

- 10

- 15

4. The ammunition article as set forth in claim 1, wherein the projectile is attached to the cartridge casing body by an adhesive bond of sufficient strength to

—27—

axial movement of the projectile relative to the cartridge

The ammunition article as set forth in claim 1, where

to the cartridge casing body by a flange on the cartridge

g into a recess in the projectile.

The ammunition article as set forth in claim 1, further

ched to the second end of the cartridge casing body.

The ammunition article as set forth in claim 6, further

t charge inside the cartridge casing body.

The ammunition article as set forth in claim 7, further

or igniting the propellant.

The ammunition article as set forth in claim 7, further

e ignition for igniting the propellant.

0. The ammunition article as set forth in claim 6, where

and the cartridge casing body is replaceable.

- 5 5. The ammunition article as set forth in claim 1, wherein the projectile is attached to the cartridge casing body by a flange on the cartridge casing body extending into a recess in the projectile.
6. The ammunition article as set forth in claim 1, further comprising a base attached to the second end of the cartridge casing body.
7. The ammunition article as set forth in claim 6, further comprising a propellant charge inside the cartridge casing body.
- 10 8. The ammunition article as set forth in claim 7, further comprising a primer for igniting the propellant.
9. The ammunition article as set forth in claim 7, further comprising an electronic ignition for igniting the propellant.
- 15 10. The ammunition article as set forth in claim 6, wherein the base is reusable and the cartridge casing body is replaceable.

11. The ammunition article as set forth in claim 6, wherein the base is a molded plastic base.

12. The ammunition article as set forth in claim 6, wherein the base is mechanically attached to the cartridge casing body.

5 13. The ammunition article as set forth in claim 12, wherein the base is attached to the cartridge casing body by screw threads.

14. The ammunition article as set forth in claim 12, wherein the base is attached to the cartridge casing body by a tongue and groove arrangement.

10 15. The ammunition article as set forth in claim 12, wherein the base is attached to the cartridge casing body by an interference fit.

16. The ammunition article as set forth in claim 6, wherein the base is attached to the cartridge casing body by adhesive.

17. The ammunition article as set forth in claim 6, wherein the base is attached to the cartridge casing body by a heat bond.



25. The ammunition article as set forth in claim 24, further comprising a primer for igniting the propellant.

27. The ammunition article as set forth in claim 21, wherein the base is reusable and the cartridge casing body is replaceable.

29. The ammunition article as set forth in claim 21, wherein the base is attached to the cartridge casing body by screw threads.

30. The ammunition article as set forth in claim 21, wherein the base is attached to the cartridge casing body by a tongue and groove arrangement.

31. The ammunition article as set forth in claim 21, wherein the base is attached to the cartridge casing body by an interference fit.

32. The ammunition article as set forth in claim 21, wherein the base is attached to the cartridge casing body by adhesive.

5 33. The ammunition article as set forth in claim 21, wherein the base is attached to the cartridge casing body by a heat bond.

34. The ammunition article as set forth in claim 21, wherein the base is attached to the cartridge casing body by an ultrasonic weld.

10 35. The ammunition article as set forth in claim 21, wherein the cartridge casing body is formed of a composite material.

36. The ammunition article as set forth in claim 21, wherein the cartridge casing body is formed of a combustible molded material.

15 37. An ammunition article, comprising:  
a molded plastic cartridge case body having a closed front end and a second  
end.

664460-9163360

38. The ammunition article as set forth in claim 37, wherein the closed front end includes walls that reduce in thickness toward an axial center of the closed front end.

39. The ammunition article as set forth in claim 37, wherein the closed front end includes at least one stress concentrator for causing preferential tearing of the closed front end at the at least one stress concentrator.

40. The ammunition article as set forth in claim 37, further comprising a base attached to the second end of the cartridge casing body.

41. The ammunition article as set forth in claim 40, further comprising a propellant charge inside the cartridge casing body.

42. The ammunition article as set forth in claim 41, further comprising a primer for igniting the propellant.

43. The ammunition article as set forth in claim 41, further comprising an electronic ignition for igniting the propellant.

44. The ammunition article as set forth in claim 40, wherein the base is reusable and the cartridge casing body is replaceable.

SUB  
Q1

66766" 9163360

46. The ammunition article as set forth in claim 40, wherein the base is mechanically attached to the cartridge casing body.

48. The ammunition article as set forth in claim 46, wherein the base is attached to the cartridge casing body by a tongue and groove arrangement.

50. The ammunition article as set forth in claim 40, wherein the base is attached to the cartridge casing body by adhesive.

51. The ammunition article as set forth in claim 40, wherein the base is attached to the cartridge casing body by a heat bond.

53. An ammunition article, comprising: /

54. The ammunition article as set forth in claim 53, wherein the prong is  
10 attached in the recess by an interference fit.

56. The ammunition article as set forth in claim 53, wherein the prong is attached in the recess by an adhesive.

15            57. The ammunition article as set forth in claim 53, wherein the prong is  
attached in the recess by heat bonding.

58. The ammunition article as set forth in claim 53, wherein the prong is attached in the recess by ultrasonic welding.

59. A method of making an ammunition article, comprising the steps of:  
molding plastic around at least a portion of a projectile to form a plastic  
5 cartridge casing body having a first end to which the projectile is attached and a  
second end.

60. The method as set forth in claim 59, wherein the plastic is molded  
around a core pull such that the core pull and the portion of the projectile define  
an interior volume of the plastic cartridge casing body, the method comprising the  
10 further step of removing the core pull from the plastic cartridge casing body.

61. The method as set forth in claim 60, wherein the core pull has a  
smaller diameter than the portion of the projectile such that the interior volume of  
the cartridge casing body includes a first interior portion defined by the portion of  
the projectile and a second interior portion having a smaller diameter than the first  
15 interior portion and being separated from the first interior portion by a shoulder,  
the shoulder being of sufficient size to prevent axial movement of the projectile  
into the second interior portion.

62. The method as set forth in claim 59, comprising the further step of heat bonding the projectile to the cartridge casing body.

63. The method as set forth in claim 59, comprising the further step of adhesive bonding the projectile to the cartridge casing body.

5        64. The method as set forth in claim 59, wherein the plastic is molded around the portion of the projectile such that the plastic enters a recess in the portion of the projectile and forms a flange on the cartridge casing body extending into the recess.

10       65. The method as set forth in claim 59, comprising the further step of attaching a base to the second end of the cartridge casing body.

66. The method as set forth in claim 65, comprising the further step of providing a propellant charge inside the cartridge casing body.

67. The method as set forth in claim 66, comprising the further step of providing a primer for igniting the propellant.

15       68. The method as set forth in claim 66, comprising the further step of providing an electronic ignition for igniting the propellant.

69. The method as set forth in claim 65, comprising the further step of molding the base from plastic.

70. The method as set forth in claim 69, wherein the base is molded from plastic prior to attaching the base to the cartridge casing body.

5        71. The method as set forth in claim 65, wherein the base is mechanically attached to the cartridge casing body.

72. The method as set forth in claim 71, wherein the base is attached to the cartridge casing body by screwing threads on the base together with threads on the cartridge casing body.

10       73. The method as set forth in claim 71, wherein the base is attached to the cartridge casing body by connecting a tongue and groove arrangement between attachable portions of the base and the cartridge casing body.

74. The method as set forth in claim 71, wherein the base is attached to the cartridge casing body by an interference fit.

15       75. The method as set forth in claim 65, wherein the base is attached to the cartridge casing body by adhesive joining.

76. The method as set forth in claim 65, wherein the base is attached to the cartridge casing body by heat bonding.

77. The method as set forth in claim 65, wherein the base is attached to the cartridge casing body by ultrasonic welding.

5 78. A method of making an ammunition article, comprising the steps of:  
molding plastic to form a single piece, molded plastic base; and  
attaching the base to an end of a cartridge casing body.

79. The method as set forth in claim 78, comprising the further step of  
molding plastic to form the cartridge casing body.

10 80. The method as set forth in claim 78, comprising the further step of  
providing a propellant charge inside the cartridge casing body.

81. The method as set forth in claim 80, comprising the further step of  
providing a primer for igniting the propellant.

15 82. The method as set forth in claim 80, comprising the further step of  
providing an electronic ignition for igniting the propellant.

83. The method as set forth in claim 78, wherein the base is mechanically attached to the cartridge casing body.

84. The method as set forth in claim 83, wherein the base is attached to the cartridge casing body by screwing threads on the base together with threads on the cartridge casing body.

85. The method as set forth in claim 83, wherein the base is attached to the cartridge casing body by connecting a tongue and groove arrangement between attachable portions of the base and the cartridge casing body.

86. The method as set forth in claim 83, wherein the base is attached to the cartridge casing body by an interference fit.

87. The method as set forth in claim 78, wherein the base is attached to the cartridge casing body by adhesive joining.

88. The method as set forth in claim 78, wherein the base is attached to the cartridge casing body by heat bonding.

89. The method as set forth in claim 78, wherein the base is attached to the cartridge casing body by ultrasonic welding.

—40—

method of making an ammunition article, comprising

g plastic around a core pull to form a molded plastic

closed front end and a second end; and

g the core pull from the cartridge casing body.

the method as set forth in claim 90, wherein the plastic

d front end includes walls that reduce in thickness to

osed front end.

the method as set forth in claim 90, wherein the plastic

osed front end includes at least one stress concentrat

ring of the closed front end at the at least one stress

the method as set forth in claim 90, comprising the fur

e to the second end of the cartridge casing body.

the method as set forth in claim 90, comprising the fur

pellant charge inside the cartridge casing body.

the method as set forth in claim 94, comprising the fur

mer for igniting the propellant.

5            91. The method as set forth in claim 90, wherein the plastic is molded  
such that closed front end includes walls that reduce in thickness toward an axial  
center of the closed front end.

92. The method as set forth in claim 90, wherein the plastic is molded such that the closed front end includes at least one stress concentrator for causing preferential tearing of the closed front end at the at least one stress concentrator.

93. The method as set forth in claim 90, comprising the further step of attaching a base to the second end of the cartridge casing body.

94. The method as set forth in claim 90, comprising the further step of providing a propellant charge inside the cartridge casing body.

15            95. The method as set forth in claim 94, comprising the further step of  
providing a primer for igniting the propellant.

96. The method as set forth in claim 94, comprising the further step of providing an electronic ignition for igniting the propellant.

97. The method as set forth in claim 93, comprising the further step of molding the base from plastic.

5 98. The method as set forth in claim 97, wherein the base is molded from plastic prior to attaching the base to the cartridge casing body.

99. The method as set forth in claim 93, wherein the base is mechanically attached to the cartridge casing body.

10 100. The method as set forth in claim 99, wherein the base is attached to the cartridge casing body by screwing threads on the base together with threads on the cartridge casing body.

101. The method as set forth in claim 99, wherein the base is attached to the cartridge casing body by connecting a tongue and groove arrangement between attachable portions of the base and the cartridge casing body.

15 102. The method as set forth in claim 99, wherein the base is attached to the cartridge casing body by an interference fit.

103. The method as set forth in claim 93, wherein the base is attached to the cartridge casing body by adhesive joining.

104. The method as set forth in claim 93, wherein the base is attached to the cartridge casing body by heat bonding.

5 105. The method as set forth in claim 93, wherein the base is attached to the cartridge casing body by ultrasonic welding.

106. A method of making an ammunition article, comprising:  
molding plastic to form a molded plastic cartridge case body, the cartridge case body including a web dividing an internal volume of the body to define a  
10 lower cavity for receiving a propellant and an upper cavity for receiving a projectile, the web including an upwardly extending prong; and  
causing the upwardly extending prong to be received in a corresponding recess in a base of the projectile to fasten the body to the projectile.

15 107. The method as set forth in claim 106, wherein the prong is attached in the recess by an interference fit.

108. The method as set forth in claim 106, wherein the prong is attached in the recess by interlocking structures on the prong and the recess.

110. The method as set forth in claim 106, wherein the prong is attached in the recess by heat bonding.

112. The method as set forth in claim 106, wherein the plastic is molded around a core pull to form the lower cavity.

114. An ammunition article comprising:  
a projectile having cannelure contours; and  
a molded cartridge casing body molded around at least a portion of the  
projectile such that a portion of a wall of the cartridge casing body follows the  
cannelure contours of the projectile.

[illegible]

~~sub 3~~

1. The first group of people who are not in the majority are those who are not in the majority.